US009408422B2

(12) **United States Patent**
Hartnett et al.

(10) **Patent No.: US 9,408,422 B2**
(45) **Date of Patent: Aug. 9, 2016**

(54) **ILLUMINATED GARMENT SYSTEM AND METHOD OF USING THE SAME**

(71) Applicant: **Big Skeleton, Inc.**, Las Vegas, NV (US)

(72) Inventors: **Andrew G. Hartnett**, Las Vegas, NV (US); **Emily K. Hartnett**, Las Vegas, NV (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **14/851,095**

(22) Filed: **Sep. 11, 2015**

(65) **Prior Publication Data**

US 2016/0073706 A1 Mar. 17, 2016

Related U.S. Application Data

(60) Provisional application No. 62/071,098, filed on Sep. 15, 2014.

(51) **Int. Cl.**

F21V 21/108	(2006.01)
A41D 13/01	(2006.01)
H05B 33/08	(2006.01)
B60Q 1/00	(2006.01)
B62J 35/00	(2006.01)

(52) **U.S. Cl.**

CPC ***A41D 13/01*** (2013.01); ***B60Q 1/00*** (2013.01); ***B62J 35/00*** (2013.01); ***H05B 33/0854*** (2013.01); ***H05B 33/0872*** (2013.01); *A41D 2600/102* (2013.01); *A41D 2600/104* (2013.01)

(58) **Field of Classification Search**

CPC A41D 1/04
USPC 362/103, 108
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2004/0260470	A1*	12/2004	Rast	G06Q 10/06 701/300
2008/0089056	A1*	4/2008	Grosjean	B60Q 1/2673 362/103
2010/0124049	A1*	5/2010	Fabian	A41D 13/01 362/108

* cited by examiner

Primary Examiner — Thuy Vinh Tran
(74) *Attorney, Agent, or Firm* — Greenberg Traurig, LLP

(57) **ABSTRACT**

A garment (e.g., vest) designed to be worn over a motorcyclist's outer clothing with high intensity LED lighting installed on front and rear surfaces thereof and motion-sensing circuitry and corresponding software that detects motorcycle deceleration and controls the sequence, color and/or intensity of the LED lighting. A small, light battery pack installed in the garment powers the system. The motion-sensing circuitry and software detects that the motorcycle is decelerating when the driver releases or reduces the throttle, downshifts and/or applies the brakes. Responsive to the driver releasing or reducing the throttle, downshifting, applying the brakes and/or riding on upward-directed terrain, the electronics and software change the color output of LEDs on the rear surface of the garment to red. The electronics of the garment are sealed in watertight assemblies.

20 Claims, 3 Drawing Sheets